Figure 1a

```
NCNCGCAGCAGGGTGCGCGCAAATTTTGAAGGAATTTTCGAGGGTGATTA
GTGCGGCGACTAAGTGCGGATGACAATAAAGATTAACGGGATTTATCAAC
GGGGAAAACACGGAAATATGTTCCCGTAGAGAAATAATGGTCTCGTTAAA
TTAGTTATAATCTTAAACAATTTAGTGGTCAATATAATAGACAAAAATGA
CAAATTAGTGGACTCTTTCGCCACCAACTCTTCACAAGACCAACTGTTTT
TGTGCCCTCCTCCCTCTCAGTTGCTACGATTCGCTGACCTCCTTTCTCTA
CTACCGTCGGCTCCAACACCATCATCATGTCGCAATTCCTAACCAGCATC
CCCAAGGAATGCGTAGGCACCAACGGCCTCGGAGTCCACTACGCCGAATT
CTCCTGCCTCCACCCTCTCCTCGGCGCCACCTACCTCCCCTTCGAACGCT
TCTACGATCCCGTCGCCACCCTCACCTGGATGCAAGATCGTCCCATGATC
CCCATCATCGCCTGCGTCGCCTACGTCGTGCTCATCGTCCTGGGACGCGC
CTACATGAAGGACCGGCCGGCGTGGAGCTGGAGGAGGATTTTGGCCGTTT
GGAATTTGAGCCTGTCGCTCTTCTCGTGGATTGGCGCGATCAGGACGGCT
CCTCAGTTGTATTACAACTTGACGACGTATTCGTTGAGGGATAATTTGTG
CGATGATCCGGCGGCGTTGTATGGGAGTGGATCGACGGGACTTTGGGTGC
AGTTGTTCATTTTGAGCAAGTTTCCCGAGTTGCTTGACACTTTCTTCATT
GTCATTCACAAGAAGCCGCTCATCTTCCTCCATTGGTATCATCATATCAC
CGTCCTTCTTTACTGCTGGCATTCCTATGTGACCACTTCTCCCAGTGGTC
TCTTCTTCGTCGTCATGAACTACAGTGTCCACGCGGTCATGTATGGGTAC
TACTTCCTCATGGCGGTCAAATTCCGTCCCAAATGGTTCAACCCCATGTT
CGTGACGTTCATGCAACTTTCTCAAATGTTTATTGGGGTGGGAGTTACCA
TTGTGGCATTTTATTATTACAGTAATCCGATTTTGGGAAAGACATGTCAT
ATCAGGAAGGAGAACAATGTTGCGGCCTTTGTCATGTACGGGAGCTACTT
TTACTTGTTTGCACAATTCTTTGTGGCGAGGTATTATAAGGTTAAGGTCA
AGGGGGATGCGAAGAAGAAGAAGGTTGTGTAAAGTGAGAGATGGAATGAA
ACAACCATCTTGTTTGGGGAAGGGGGTATTGGATAGCGGGTACCATTCAG
TATCGTTGAGGTGCATTTAATGTTGAATGAACAAACTTGACGAGACGAGG
GATTTTGATCTTCATGAACGAGTGGGAGCATCTTTCAATCCATTGGGGAG
AGAGGAGAAGTGAGAGAAGTGCTACTTTGGGAGTTTGAGAGAGTAAATTA
ATGTCTTTTGCTATGAATTGCTGCCTCAAAAACGCAACGTGCTAGCAAAC
CTCGTTAACAATGACAAAGTTATTTCTTGTTGTATGGGACATACCACGAT
TGTATCATAAAAGAAAACCAATTCTATTGAGTTGTAAACATCTAGAGTGC
AGTATCGAGCAACAGCCCACGCCATCACGATACACTAAACACACATTCGT
CTTCATCTTTACATTCTAACCACAGCATGCTGGCTCTCTTACCTCTTCAN
NC
```

Figure 1a

```
ACGCGGGGTTGCTACGATTCGCTGACCTCCTTTCTCTACTACCGTCGGCTCCAACACCAT
CATCATGTCGCAATTCCTAACCAGCATCCCCAAGGAATGCGTAGGCACCAACGGCCTCGG
AGTCCACTACGCCGAATTCTCCTGCCTCCACCCTCTCCTCGGCGCCACCTACCTCCCCTT
CGAACGCTTCTACGATCCCGTCGCCACCCTCACCTGGATGCAAGATCGTCCCATGATCCC
CATCATCGCCTGCGTCGCCTACGTCGTGCTCATCGTCCTGGGACGCGCCTACATGAAGGA
CCGGCCGGCGTGGAGCTGGAGGAGGATTTTGGCCGTTTGGAATTTGAGCCTGTCGCTCTT
CTCGTGGATTGGCGCGATCAGGACGGCTCCTCAGTTGTATTACAACTTGACGACGTATTC
GTTGAGGGATAATTTGTGCGATGATCCGGCGGCGTTGTATGGGAGTGGATCGACGGGACT
TTGGGTGCAGTTGTTCATTTTGAGCAAGTTTCCCGAGTTGCTTGACACTTTCTTCATTGT
CATTCACAAGAAGCCGCTCATCTTCCTCCATTGGTATCATCATATCACCGTCCTTCTTTA
CTGCTGGCATTCCTATGTGACCACTTCTCCCAGTGGTCTCTTCTTCGTCGTCATGAACTA
CAGTGTCCACGCGGTCATGTATGGGTACTACTTCCTCATGGCGGTCAAATTCCGTCCCAA
ATGGTTCAACCCCATGTTCGTGACGTTCATGCAACTTTCTCAAATGTTTATTGGGGTGGG
AGTTACCATTGTGGCATTTTATTATTACAGTAATCCGATTTTGGGAAAGACATGTCATAT
CAGGAAGGAGAACAATGTTGCGGCCTTTGTCATGTACGGGAGCTACTTTTACTTGTTCGC
ACAATTCTTTGTGGCGAGGTATTATAAGGTTAAGGTCAAGGGGGATGCGAAGAAGAAGAA
GGTTGTGTAAAGTGAGAGATGGAATGAAACAACCATCTTGTTTGGGGAAGGGGGTATTGG
ATAGCGGGTACCATTCAGTATCGTTGAGGTGCATTTAATGTTGAATGAACAAACTTGACG
AGACGAGGGATTTTGATCTTCATGAACGAGTGGGAGCATCTTTCAATCCATTGGGGAGAG
AGGAGAAGTGAGAGAAGTGCTACTTTGGGAGTTTGAGAGAGTAAATTAACGTCTTTTGC
AAAAAAAAAAAAAAAAAAAAAAAAAAA
```

Figure 2a


MSQFLTSIPKECVGTNGLGVHYAEFSCLHPLLGATYLPFERFYDPVATLTWMQDRPMIPI
IACVAYVVLIVLGRAYMKDRPAWSWRRILAVWNLSLSLFSWIGAIRTAPQLYYNLTTYSL
RDNLCDDPAALYGSGSTGLWVQLFILSKFPELLDTFFIVIHKKPLIFLHWYHHITVLLYC
WHSYVTTSPSGLFFVVMNYSVHAVMYGYYFLMAVKFRPKWFNPMFVTFMQLSQMFIGVGV
TIVAFYYYSNPILGKTCHIRKENNVAAFVMYGSYFYLFAQFFVARYYKVKVKGDAKKKKV
V


TpELO2.1, amino acid sequence from cDNA

MSQFLTSIPKECVGTNGLGVHYAEFSCLHPLLGATYLPFERFYDPVATLTWMQDRPMIPI
IACVAYVVLIVLGRAYMKDRPAWSWRRILAVWNLSLSLFSWIGAIRTAPQLYYNLTTYSL
RDNLCDDPAALYGSGSTGLWVQLFILSKFPELLDTFFIVIHKKPLIFLHWYHHITVLLYC
WHSYVTTSPSGLFFVVMNYSVHAVMYGYYFLMAVKFRPKWFNPMFVTFMQLSQMFIGVGV
TIVAFYYYSNPILGKTCHIRKENNVAAFVMYGSYFYLFAQFFVARYYKVKVKGDAKKKKV
V

Figure 1b


GTGGTCTCATGGCGTGGGTCGCTTGGTTCTCCTTCGCTGTGCTCCCCTCT
CTCCTTCTCGGCGGTGTGTGCGGTCTTCGTTTTCATTTGCCTTCTTTTCC
CATCAGGTTTCCTAGACGTGCGGGGCCGCGTCCTTCTCTTGGGTTGGGCT
TGCCCGCTTTGGTTTGATATCACAACAGTTACCTGGCAACCATGGACGCT
TACAACGCTGCAATGGATAAGATCGGTGCCGCCATCATCGATTGGTCTGA
TCCCGATGGCAAGTTCCGTGCCGATAGAGAGGTGAGCATGAATGTACACA
CCATGGTTGTCTCGGCATGACGGTGTCATTGGATGGTGTCAGTGCATCTC
TCTGTTTGCATCTATTCTAAACAACACATCTCTTCACCTCGTTACCTTAC
TCAACAACTACCACACAACCATCATCATCGTAGGACTGGTGGCTCTGCGA
CTTCCGTAGCGCCATCACCATCGCTCTCATCTACATCGCCTTCGTCATCC
TCGGTTCCGCCGTCATGCAATCCCTCCCCGCAATGGATCCCTACCCCATC
AAATTCCTCTACAACGTCTCCCAAATCTTCCTTTGTGCCTACATGACTGT
CGAGGCGGGATTTTTGGCCTACCGCAATGGATATACCGTCATGCCTTGCA
ATCATTTCAATGTGAATGATCCTCCCGTGGCGAATCTTCTTTGGTTGTTT
TATATTTCCAAGGTGTGGGACTTTTGGGATACCATTTTCATTGTGTTGGG
GAAGAAGTGGCGTCAATTATCTTTCTTGCATGTATACCATCACACCACCA
TCTTTCTATTCTATTGGCTGAATGCCAATGTCTTGTACGATGGTGACATC
TTCCTTACCATCTTGCTCAATGGATTCATCCACACGGTGATGTACACGTA
TTACTTCATCTGTATGCATACCAAAGATCCCAAGACGGGCAAGAGTCTTC
CTATATGGTGGAAGTCGAGTTTGACGGCGTTTCAGTTGTTGCAATTCACT
ATCATGATGAGTCAGGCTACCTACCTTGTCTTCCACGGGTGTGATAAGGT
GTCGCTTCGTATCACGATTGTGTACTTTGTGTACATTTTGAGTTTGTTCT
TCCTTTTTGCTCAGTTCTTTGTGCAATCATACATGGCACCCAAAAAGAAG
AAGAGTGCTTAGATTGGAAAGGGGTGTGGGCGACGAGCTTTCCTGTTGAG
GGTGGGTGGTGGAACGGAGTTGGTTTTTTGAAGCATCTGCAATATTCGCA
GGACTGTTGCTGTGAGAATAGCTATGGAGTAAAGGTGGGGGGGGGTGGAT
TCATGGCGGACAGGCATGCCTAAGATACTAAGGAATGTTCATGAACATGA
TGTTGATACTTTATTGTAAGGTACTGTTGGGAATTAATGAGAGGGTACTG
AAAGGAGAGATGAGTGTCTGTCAAAACGCTTGGGTTAGTTGTTACTTTCC
CTTCGTTCTTTCAGCTATAAGTCTTTGCTGAGGAGTTAATCCTAAGCTGA
CACCATTACGTTGAACAACGCAACAATTAGCGTTGAGCCCGACAACTCTC
GACAAAGAGGTTTTGTAGATTGTATCCCCTGGCGCAAGTTAACGTACAGG
TCCTTCATTCACGGAACCATAATCCCATGGATGCATCCTGTGCCAATAAC
CTTCAAAAACGTGCGTCCCACTTGAGAAAACCACTATTACGAGTTTCACC
TCAGGTCCTGACCGGCAAAAACAATTGAATCAGCAGCAAAGCCCACAAGC
AAGCACTTCGCGATGAGGACCACAGGAAGAGACGCTCACACCTCCCCGCC
TTCGGACGAGCCCCACGAGCGCGNGTGG


Figure 2b


DWWLCDFRSAITIALIYIAFVILGSAVMQSLPAMDPYPIKFLYNVSQIFLCAYMTVEAGF
LAYRNGYTVMPCNHFNVNDPPVANLLWLFYISKVWDFWDTIFIVLGKKWRQLSFLHVYHH
TTIFLFYWLNANVLYDGDIFLTILLNGFIHTVMYTYYFICMHTKDPKTGKSLPIWWKSSL
TAFQLLQFTIMMSQATYLVFHGCDKVSLRITIVYFVYILSLFFLFAQFFVQSYMAPKKKK
SA

Figure 1c

AAAAAAAAAAAAAAAAAAAAAAGANAGGAAATGTCGCACAACGGCAGCTGCAGCTTCATG
CCTGCAGGTCGACTCTAGAGGATCCCCGTGTTGTCAATGTGGCGCAAGTGCTGCTCAAAT
GGGTGGACGGTGTATGCGATTGTGGATGCGGTGATGAATAGAGACCATCCATTTATTGGA
AGTAGAAGTTTGGTTGGGGCGGCGTTGCATAGTGGGAGCTCGTATGCGGTGTGGGTTCAT
TATTGTGATAAGTATTTGGAGTTCTTTGATACGTATTTTATGGTGTTGAGGGGGAAAATG
GACCAGGTGAGTTGACGAGTTGCTGTTTAGTGTTGGTTAGATGGTACTTGGTGAAGTTGG
TGACAGTGTGTGGTGTGGCGTTGGATATATGGATATGGAGAAGGTACCAATTGGTTGGAA
GGAACAATGAGACACATCCTGCGCACAGTGTCCAGAGAGACGAATCTGCAACGATTCAAA
GATCATTTAAGAGTTCATCAGCTACGCAGAAGAATGGTGTAAATGATACTGTTCAGTTTC
AAAAGTTGGCATGATACTACTCAGCTTTGAAGTGCATCGGTCTGCTCAGGGAACGGGGAA
GGCTTTCACCAACAACGTTACCAATCCACATCTCACGCTTCCACCTCATTCTACAAAAAC
AAAAAAACAGGTCTCCTTCCTCCACATCTACCACCACACGACCATAGCGTGGGCATGGTG
GATCGCCCTCCGCTTCTCCCCCGGCGGAGACATTTACTTCGGGGCACTCCTCAACTCCAT
CATCCACGTCCTCATGTATTCCTACTACGCCCTTGCCCTACTCAAGGTCAGTTGTCCATG
GAAACGATACTTGACTCAAGCTCAATTATTGCAATTCACAAGTGTGGTGGTTTATACGGG
GTGTACGGGTTATACTCATTACTATCATACGAAGCATGGAGCGGATGAGACACAGCCTAG
TTTAGGAACGTATTATTTCTGTTGTGGAGTGCAGGTGTTTGAGATGGTTAGTTTGTTTGT
ACTCTTTTCCATCTTTTATAAACGATCCTATTCGAAGAAGAACAAGTCAGGAGGAAAGGA
TAGCAAGAAGAATGATGATGGGAATAATGAGGATCAATGTCACAAGGCTATGAAGGATAT
ATCGGAGGGTGCGAAGGAGGTTGTGGGGCATGCAGCGAAGGATGCTGGAAAGTTGGTGGC
TACGGCGAGTAAGGCTGTAAAGAGGAAGGGAACTCGTGTTACTGGTGCCATGTAGATAAA
GAGGTTGAAGAGAGATGAAGGCAACTCTTCATGATGGTGGTCGAAGTTTCATCAACATTA
ACTGTATGAATCAAGATAAAGGTGGTTGGACAAGGATGTCTTGGAATACGGCATGAATAG
GAGAACAAGTTGCTAATGATTCTAGAGAATGTACATTCAGACTTCGTGTATAAAGACGAT
ACTCCGGGATCGTCACGTACCGTTTCGAAGTAGGCCATGCTCAAGACCGTGATATACTGA
GTGCGCCGATCTATCTACTTGAAGCCATCCTTACTGTGCGGCGATCGAACAAGAATTCCC
GACNGG

Figure 2c

MWRKCCSNGWTVYAIVDAVMNRDHPFIGSRSLVGAALHSGSSYAVWVHYCDKYLEFFDTYF
MVLRGKMDQVSFLHIYHHTTIAWAWWIALRFSPGGDIYFGALLNSIIHVLMYSYYALALLK
VSCPWKRYLTQAQLLQFTSVVVYTGCTGYTHYYHTKHGADETQPSLGTYYFCCGVQVFEMV
SLFVLFSIFYKRSYSKKNKSGGKDSKKNDDGNNEDQCHKAMKDISEGAKEVVGHAAKDAGK
LVATASKAVKRKGTRVTGAM

Figure 3A

```
ACGCGGTGTCACGCGCGTCTTCCAGCGCGAGCCGCTGCTCCGCCGCGAAGTCTCTAGGCATGCCGCCTTCGGCCGCGAGCGAGGGCGGC
GTGGCGGAGCTGCGCGCGGCGGAGGTCGCCTCGTACACGCGCAAGGCGGTGGATGAGCGCCCCGACCTCACCATCGTCGGCGATGCCGT
CTACGACGCCAAGGCCTTCCGTGACGAGCACCCGGTCGGCGCCCACTTTGTGAGCCTCTTTGGCGGGCGCGACGCGACCGAGGCGTTCA
TGGAGTACCACCGGCGGACGTGGCCCAAGGCGCGGATGAGCAAGTTCTTCGTGGGCTCGCTCGACGCCTCCGAGAAGCCGACGCAGGCC
GACAGTGCCTACCTCCGGCTGTGCGCGGAGGTGAACGCCTTGCTGCCAAAGGGGAGCGGCGGCTTTGCGCCGCCCTCCTATTGGCTCAA
GGCGGCGGCGCTGGTGGTGGCCGCCGTGTCGATTGAGGGGTATATGCTGCTGCGCGGCAAGACGCTCCTCCTCTCCGTCTTTCTCGGCC
TCGTCTTTGCGTGGATCGGTCTCAACATCCAGCACGACGCGAACCACGGCGCGCTCTCGCGCCACTCGGTGATCAACTACTGCCTTGGG
TACGCGCAGGACTGGATCGGCGGCAACATGGTGCTCTGGCTGCAGGAGCACGTGGTGATGCACCACCTGCACACCAACGACGTCGACGC
CGACCCGGACCAGAAGGCGCACGGCGTGCTGCGGCTCAAGCCAACGGACGGCTGGATGCCGTGGCATGCGCTCCAACAGCTTTACATTC
TGCCCGGCGAGGCGATGTACGCGTTTAAGCTGCTCTTCCTCGACGCGCTCGAGCTGCTCGCGTGGCGATGGGAGGGCGAGAAGATCTCG
CCCCTCGCGCGCGCCCTGTTTGCACCAGCGGTGGCGTGCAAGCTTGGCTTCTGGGCGCGCTTCGTCGCGCTGCCGCTCTGGCTGCAGCC
GACGGTGCACACGGCGCTGTGCATCTGCGCGACGGTGTGCACGGGCTCCTTCTACCTCGCCTTCTTCTTCTTCATCTCGCACAACTTTG
ACGGCGTGGGTAGTGTGGGCCCCAAGGGGCAGCTTGCCGCGCTCTGCAACCTTCGTGCAGCGGCAGGTCGAGACGAGTTCGAATGTGGGC
GGCTACTGGCTTGGCGTGCTCAATGGAGGGCTCAACTTCCAGATCGAGCACCATCTTTTCCCGCGGCTGCACCATTCGTACTACGCGCA
GATTGCCCCAGTGGTGCGCACGCACATCGAGAAGCTCGGCTTCAAGTACAGGCACTTCCCCACGGTGGGCTCCAACTTGTCGTCCATGC
TGCAGCACATGGGCAAGATGGGCACTCGCCCAGGAGCTGAGAAGGGCGGCAAGGCCGAGTGAGCTGCCGCCCTACCCTGCCTCTGCGGC
TAGCCAGCAACCGGGTGCCAGCGAGCCCCTCTTCCATCCGAGCCCTTTTCTCCTTCACCCTGCCATGTGTCAGCGGCACTGACTGAACT
GACGTCGCCGTGCCGCTGGCGCTCTCCGTCGCCAGCCACTGAGAGGCTGCAATGCCGCCCGACGCCGCTCACGCGGCTTTGGTCTTAAA
AAAAAAAAAAAAAAAAAA
```

Figure 3B

```
MPPSAASEGG VAELRAAEVA SYTRKAVDER PDLTIVGDAV YDAKAFRDEH PVGAHFVSLF
GGRDATEAFM EYHRRTWPKA RMSKFFVGSL DASEKPTQAD SAYLRLCAEV NALLPKGSGG
FAPPSYWLKA AALVVAAVSI EGYMLLRGKT LLLSVFLGLV FAWIGLNIQH DANHGALSRH
SVINYCLGYA QDWIGGNMVL WLQEHVVMHH LHTNDVDADP DQKAHGVLRL KPTDGWMPWH
ALQQLYILPG EAMYAFKLLF LDALELLAWR WEGEKISPLA RALFAPAVAC KLGFWARFVA
LPLWLQPTVH TALCICATVC TGSFYLAFFF FISHNFDGVG SVGPKGSLPR SATFVQRQVE
TSSNVGGYWL GVLNGGLNFQ IEHHLFPRLH HSYYAQIAPV VRTHIEKLGF KYRHFPTVGS
NLSSMLQHMG KMGTRPGAEK GGKAE
```

Figure 4a

```
GCACGAGGGTGCTGCTACCTGCTGTACGTCTCCCTCGGCTCGATGTACAT
CTTCTGCAACTTTGCCGTGTCGCACACGCACCTGCCCATCGTTGAGGCCG
ACCAGCACGCCACCTGGGTTGAGTACTCGGCCAACCACACGACCAACTGC
GCGCCCTCGTGGTGGTGCGACTGGTGGATGTCTTACCTCAACTACCAGAT
CGAGCATCATCTGTTCCCGTCCATGCCGCAATTCCGCCACCCGACGATCG
CGCCGCGCGTCAAGGCGCTCTTCGAGAAGCACGGGCTGCACTATGACGTG
CGCGGCTACTTTGAGGCGATGGCCGACACGTTCATGAACCTTGACAAGGT
CGGCAACGCGCACGAGCACAACCATTAGGCCGTAGCCGCTTGGAAAGAGG
CCTCCTGCATACGCGGCGACGCGTCGGCGCGCGGCGGCGTGCACGGGAGC
ACAAAGTGATGGATGGACCTTGGGCGACGCCGACGGCCAAGGAGTGGTTG
TCTCTGTCGTCGCCAGGGCCCAGGAGCCCAGGGGCAGGGTTGCAGAGCTT
GGGCGCGATTGGAGGCAGGGCCGGGCGCGTCGGCGTTCGCGAGTCTGGCG
AGGCGCTCTGCGAGCTCTGCACGACTGCGCCCAGAGGCGTGCGCGCGCGC
GCGAGTTCCAAAAAAAAAAAAAAAAAAAAAAAAA
```

Figure 4b

```
ARGCCYLLYVSLGSMYIFCNFAVSHTHLPIVEADQHAT
WVEYSANHTTNCAPSWWCDWWMSYLNYQIEHHLFPS
MPQFRHPTIAPRVKALFEKHGLHYDVRGYFEAMADTF
MNLDKVGNAHEHNH
```

Figure 5a

```
GCACGAGGCCTCTTCGGCTGGGCGCTCGACGACGCGCTCGCCAAGTATGA
CAAGGGCGGCGTCGGCCCCGGCTTCCTGTACAACGCGGTCGTCTTCTCGT
CGGTGCAGGCGCTGCTCGGCGGTCGCGTGCGCATGATGGTCGCCGGCTCC
GCGCCCCTCTCCGCCGACGTGCAGAAGTTTGTGCAATCGTGCTTCAACGC
GCCGCTTCGCCAAGGCTACGGCCTCACCGAGACGTGCGCGGCGACGACGC
TCTGCGCGCTGCACGACAACACGCCGTCGCAAGTTGGGCCGCCGCAGGAG
TCGGCGTGCATCACGCTGCGCGACTGGGAGGAGGGCAACTACCGCAACCG
CGACGCCAACGACCCGGCCATCGGGATGCGGCGCGGCGAGATCCTGATCG
GTGGGCCCGCCGTCTGCCTCGGCTACTACGTGAACGAGCGCGCGCCCGAC
GCGGACGTGGTGAAGCGCAACGCGGAGGACTTTGTGACGATCAACGGCAT
GCGCTTCTTCTGCTCGGGCGACATCGGCCAGATCACGCCGAGCGGCTGCG
TGCAGATTATCGACCGGAAGAAGGACCTCGTCAAGCTGCAGCAGGGCGAG
TACGTCGCGCTCTCCAAGGTGGAGAACGCGCTCAAGAACTCGTCGTACAC
GCAGATCCCGTACGTCTACGCGCTCTCATCCAAGAGCTACTGCATCGCGC
TCCTCTGCCCGCAGCACGCGGCGATCCGCCAGCTCGCCGCCTCGCTGCAG
ATCAGCGGCAAGGAGCTTTCCGAGCTGTGCGCGCACCCGCAGATCGTCGC
GGCCGTGCTCAAGGACCTGCAGGCGCAGTGCAAGGCGGCCAAGCTCGCGG
GCTTCGAGACGCCGAGCAAGCTCATCCTCGTGTCGGACGAGTGGACCGTT
GAGAATGACATGCTCACCACGACGATGAAGATCAAGCGCAAGCCAATCGC
TGACCGGCACGCGAGCGAGATCAAGGCCGTTTACGTCTGAGCCCGCGCCT
TTTTGTACAACCTCGAGAGCGCCACTGTCTTGATGGCGCGCGCGTGCTGT
TGTGCAGGCCGTCGGCATTGACCGCGGCGCTTGAACGCAAGGCAGGCGCA
AGGCGCGGGAGGGATTGCTGGGGATGGCGGCTGCCGCAGTTGCTGAGCAG
AAGGCAGTCTCCGGCTCTCGACAGGTGGCGCCCGTTGTGCAGAATGTTCG
CAGCCCCTCCCCCCTCGGGCGGCTGCCATTCGGGGCAGCGCTCGCACATG
TGCTGCGCTCCGCAGCCGCACGCCACGGCCACCAACGCGTGTGCCTGCCG
TCACGCGCCGCGCCCGTGGGAACGACCGTTGCCCTCGCAC
```

Figure 5b

```
ARGLFGWALDDALAKYDKGGVGPGFLYNAVVFSSVQALLG
GRVRMMVAGSAPLSADVQKFVQSCFNAPLRQGYGLTETCA
ATTLCALHDNTPSQVGPPQESACITLRDWEEGNYRNRDAND
PAIGMRRGEILIGGPAVCLGYYVNERAPDADVVKRNAEDFV
TINGMRFFCSGDIGQITPSGCVQIIDRKKDLVKLQQGEYVAL
SKVENALKNSSYTQIPYVYALSSKSYCIALLCPQHAAIRQLA
ASLQISGKELSELCAHPQIVAAVLKDLQAQCKAAKLAGFETP
SKLILVSDEWTVENDMLTTTMKIKRKPIADRHASEIKAVYV
```

Figure 6A

```
ACTGCGTGTACACAGCATGGCGGCTCGCGCGGTTGACGCGCTCGTCGTGAGCGCGTTCAC
GGCGTTCGTGCAGATCGGCGTGTGGGCGCTCACGCCCGTGGGCATTGCGTGGGCCCTCGC
GTTCCACTGGAAGGTGACGCTGCCGCTGCTCGCCCTTTATCTCGCGTCGTACCTCGACGG
CGCCGAGGTGCGCGTCAAGCGCGTGCGCGCGTGGCCGGCGTTCTCCCGGCATTTTTGGCT
GTTCACGTTCATGCGCAGGGTCTACCGGCAGCGCGTTCACGTGCCAGCTGGCCTCGAGGC
CGAGGAGCAGATCATCCTAGCGCTGCATCCGCACGGCTCGATGGCGGACTACCGCGCGAT
CCTCGACGGCCAGCTGCTCGACCTACTGCCCGCGCTGCGCGGCAAGATGCGCTGGCTCGC
GGCGAGCGTGCTCTTTCGGCTTCCCATCGTGCGCGAGCTCACCCTTTGGACCGGCTGCAT
CGACGCGCGCCGCTCGGTTGCCGAGAGTGCGCTGCGTGGCGGCTACTCAGTCGGCGTACT
GCCCGGCGGCGAGCAGGAGCAGCTGCGCACGCGCTACGGGCGCGAGTCGGTATATTTGCG
CAAGCGCTTTGGCTTCGTCAAGCTTGCGCTCCGCTTCGGCGTGCCGCTCGTGCCTGGGTA
CGTGTTCGGGTGCGTCGACCTGTACCACACTTCATCCCTGCTCTTCTCGGCGCGCGAGTG
GCTCGTGCGCTCTCTCGGCGTGTGCGTGCCCGTGTGCTTCGGAGCGTGGGGCGTGCCCAT
GGCGCCGCTTGCTGTGCCGCTCAACGTCGTGATCGGCCGGCCGATCAAGCTGCCGCGCAA
CCCTGAGCCGACCGATGAGGACGTCGCGCGCGCGCTCGACCAGTACATCGCCGCGCTGCG
CGCGCTCTTTGACGAGAACAAGGCGCGCTTTGGCTATGCCGACCGCGAGCTGGAGGTGTG
CTGATTGTGAAGAAGTGTCATTGAAGGTCGGCGTCAGCAGGCGCACCGCGCACCAAGCCA
CTCACGTCTTGATCGCTGAACCGCCGTGAACGATGCCGTTGCGACACGCTTGAAGATGGC
CAGAAAAAAAAAAAAAAAAA
```

Figure 6B

```
MAARAVDALV VSAFTAFVQI GVWALTPVGI AWALAFHWKV TLPLLALYLA SYLDGAEVRV
KRVRAWPAFS RHFWLFTFMR RVYRQRVHVP AGLEAEEQII LALHPHGSMA DYRAILDGQL
LDLLPALRGK MRWLAASVLF RLPIVRELTL WTGCIDARRS VAESALRGGY SVGVLPGGEQ
EQLRTRYGRE SVYLRKRFGF VKLALRFGVP LVPGYVFGCV DLYHTSSLLF SAREWLVRSL
GVCVPVCFGA WGVPMAPLAV PLNVVIGRPI KLPRNPEPTD EDVARALDQY IAALRALFDE
NKARFGYADR ELEVC
```

Figure 7a

```
GGCACGAGGGGGAGATGGCGGCGCCGACATCGCCGTACGGCGCGGAATCGCCGCGCGCGGCGTACGCGTAC
CCGGAGCGTGCAAATGTCAAGATGTCCGAGGCGCTGCGCGTACTCGACGAGGGCGTGCACCCGCTCGTTAT
TCACAGCTCGCAGATCCTCGCCGCCGCGCTGCTCGTCACGGCCGCCGTCAACCACTTTCCCAAGATCACCG
TCGCGGACCTCGCCGAGATCTGGCGCTCGCTGCAGATCGACGTGGCGTACGCGTTCGCGCTGACTGCGGTG
GCCGTGCTGCTTCTCGGCTACTACGCTCTCCGCCACCCGCGCCCCGTCTACCTCGTCGACTTCGCCACGTG
GCAGCTGCGCGACGACAAGGACGACGGCAGCCTGAGTGCGACGAGCGATTTCTTCCGCTCGACGATCACGG
ATTGCGGCAATTTTTGCGACGAGTCGGTCGACTTCCAGATGAAGCTTTTTGAGCGCAACCAGATCTCCGAG
CGCTGCTACTTCCCACCTGGCATCCGCGCCTACCGCAAGGGCGAGCGCGACTTTGACTTTTCGATGGCCGC
CGCGCGCAAGGAGTTCGAGACTGTCGTCTTCACGACCGTCGACGAGCTGCTCGCCAAGACGGGCGTAAAGC
CGCGAGATATCGACATCCTCGTCGTCAACTGCTCGCTCTTCAACCCGACGCCATCGCTGGCTGCGATCGTG
ATCAACCACTACCAGATGAAGGACTCCGTACAGAGCTACTCACTTGGCGGGATGGGTTGCTCAGCGGGACT
CATCTCAATCCACCTCGCAAAGGACCTGCTGCAGGTCTACCCGCGCAAGCGCGCGCTCGTCATCTCGACGG
AGAACATCACGCAAAATTTTTACCAGGGCAACGAAAAGTCGATGCTCATCTCGAACACGCTCTTCCGAATG
GGCGGCGCCGCCGTCCTCCTCTCCGGCCGCCACGCCGACCGGCGCGTCGCCAAGTATCAACTGCTGCACAC
CGTCCGCACGCACAAGGGCGCGGACCCGGACGCGTACCGGTGCGTCTTCCAGGAGGAGGACAAGGCGGGGC
ACGTGGGCGTGCGCCTGTCGAAAGACGTGATGGAGTGCGCCGGCGCCGCGATGAAGACCAACATCTCCGTC
CTCGCGCCTCTGATTCTGCCCGTTTCTGAGCAGGTCCGATTTCTCGCAAACTACGTTGCGCGCAAGTGGCT
GCGAATGAAAGGCGTGAAGGGATACGTGCCGGACTTCACAACGGCCGTGCAGCACTTTTGCATCCACACGG
GCGGGCGCGCGGTGCTCGACGCGCTGCAGGCGAACTTGTCGCTCTCAGATTACTACCTCGAGCCGAGCCGT
TACTCCCTGTGGCGCTGGGGTAACGTCTCAAGCGCCTCAGTCTGGTACGAGCTCGACTGGCTCGAAAAGTC
CGGCCGCATCCGGCGGGGCGACAAGGTGTGGCAGATTGGGTTTGGCAGCGGCTTCAAGTGCAACTCGGCCG
TCTGGCGGGCGTGCCGAGCGATGCCCTAGCTACGCCGGCGCCGTCCGCATTGCCAGTGGTTCGTGACAGAC
AGTCACACTGACGAGTGCGGAGTGACGTCTGACGCCTTCCCCCCCCCGCCCACCACCTCCACCTCCACCTC
CTTCACTCTCACTCAATCGCGCGGCGGCCAGAGCAGGAGCGCGCTCGTGCTCGCCATCACCGCCTTGTAGT
CCTCGCGCCGCTCGAGCGAGCGCGCGTCCATGAGCGGCACGGACGCGAAGCGGAAGAAGAGCCACATCACA
GCAGAAAAAAAAAAAAAAAAAAAACTCGAGACTAGTTCTCTCTACCGCGCTGCCGAGCTCAAGCACGGCCGC
GTGTGCATGCTCGCCGTCACCGGCATGCTTGTCCAGGAGGTGTACTCGTGGCCGGCACCCGACGGCGTCTT
CAAGGCGCCGACGCCGCTCGGCGCGCTCTCGACCGTGCCGGCGCTCGGCCTCATCCAGCTCATCGTCTTCC
TCGGCATCATCGAGGTGCGCTCGGCGAACTACCAGGGCCGCGTGCCCGGCGACCTTGGCTTTGACCCGCTC
GG
```

Figure 7b

```
MAAPTSPYGA ESPRAAYAYP ERANVKMSEA LRVLDEGVHP LVIHSSQILA AALLVTAAVN
HFPKITVADL AEIWRSLQID VAYAFALTAV AVLLLGYYAL RHPRPVYLVD FATWQLRDDK
DDGSLSATSD FFRSTITDCG NFCDESVDFQ MKLFERNQIS ERCYFPPGIR AYRKGERDFD
FSMAAARKEF ETVVFTTVDE LLAKTGVKPR DIDILVVNCS LFNPTPSLAA IVINHYQMKD
SVQSYSLGGM GCSAGLISIH LAKDLLQVYP RKRALVISTE NITQNFYQGN EKSMLISNTL
FRMGGAAVLL SGRHADRRVA KYQLLHTVRT HKGADPDAYR CVFQEEDKAG HVGVRLSKDV
MECAGAAMKT NISVLAPLIL PVSEQVRFLA NYVARKWLRM KGVKGYVPDF TTAVQHFCIH
TGGRAVLDAL QANLSLSDYY LEPSRYSLWR WGNVSSASVW YELDWLEKSG RIRRGDKVWQ
IGFGSGFKCN SAVWRACRAM P
```

Figure 7c

```
GCACGAGGCCTCGTGCCGAATTCGGCACGAGGCGGCGCTGTGGTCGTGGT
TACCGACGTACGACGAGTTTGTCGATGGGCTTTCGTTCGTCGACCGCGAG
AAGATCGGCGTGCACATGGTCGACCAGGGCGTGATTACCTCTGCGGAGTG
GGCGGCCATCTCGGTCGACAAGCACATGTCCTTCTTCTCCGACGCGGCCG
AGTTCACGGGCGACCACTGGATCATCCCGCTCGTCGCGGTCGCACTCTAC
CTCGTGATGATCGTCGTCGGCCCAATGATCATGGCCAACCGGCCGCCGCT
CCCCGTGAATGGGCTCGCCTGCGCGTGGAACTGGTTCCTGGCCGCATTCA
GCACTTTCGGCGTGGCTTGCACGTGGCACTGTATCTTCACCAGGCTGCGT
AGCCGCGGCTTCGAGAGCACGACGTGCGGCAGCGCCATGTTCATGTCGCA
GGGGTACGTTGGCTTGGCAATGCTGCTCTTCATCTACTCCAAGCTCTTCG
AGTTGATCGACACCTTCTTCCTCATCGCGAAGAAGGCGGATGTGATCTTC
CTGCATTGGTACCACCACGTCACCGTGCTGCTCTACTGCTGGCACTCGCA
CTCGGTCCGGATACCGAGCGGGATCTGGTTCGCCGCGATGAACTACTTTG
TGCACGCCATCATGTACTCCTACTTTGCGATGACGCAGATGGGTCCGCGC
TACCGCAAGCTCGTCCGGCCGTACGCGCGGCTGATTACGACCCTGCAGAT
CTCGCAGATGTTCGTCGGCCTCATCGTCAACGGCTCGATCATTTACTTCA
CGTCGCTCGGGCACGCATGCAAGTCGAGCAAGACGAACACGATCCTGAGC
TGGCTGATGTACCTCAGCTACTTTGTGCTATTCGGACTGCTCTACCTGCG
CAATTACATCCTTGGTACACATGGCAAGCCGGCGGGCAAGCGCGCAAAGG
GCAAGGCGGAATAGTGCAGGGGCCGGGGAGGCGGTGCCCACCCGCGCTCG
CAAAGCGGTCGCGCTCCTTGCCGAGATGCGACGAGAGTCGAAGAGGTGAA
ACCTCCTTAAAATAATGCTACTCCTAGATTTTCGCTTTGTGCTTCCGTAT
AGATGGTCAAGCC
```

Figure 7b

```
H  E  A  S  C  R  I  R  H  E  A  A  L  W  S  W  L  P  T  Y  D  E  F  V  D  G  L  S  F
V  D  R  E  K  I  G  V  H  M  V  D  Q  G  V  I  T  S  A  E  W  A  A  I  S  V  D  K  H
M  S  F  F  S  D  A  A  E  F  T  G  D  H  W  I  I  P  L  V  A  V  A  L  Y  L  V  M  I
V  V  G  P  M  I  M  A  N  R  P  P  L  P  V  N  G  L  A  C  A  W  N  W  F  L  A  A  F
S  T  F  G  V  A  C  T  W  H  C  I  F  T  R  L  R  S  R  G  F  E  S  T  T  C  G  S  A
M  F  M  S  Q  G  Y  V  G  L  A  M  L  L  F  I  Y  S  K  L  F  E  L  I  D  T  F  F  L
I  A  K  K  A  D  V  I  F  L  H  W  Y  H  H  V  T  V  L  L  Y  C  W  H  S  H  S  V  R
I  P  S  G  I  W  F  A  A  M  N  Y  F  V  H  A  I  M  Y  S  Y  F  A  M  T  Q  M  G  P
R  Y  R  K  L  V  R  P  Y  A  R  L  I  T  T  L  Q  I  S  Q  M  F  V  G  L  I  V  N  G
S  I  I  Y  F  T  S  L  G  H  A  C  K  S  S  K  T  N  T  I  L  S  W  L  M  Y  L  S  Y
F  V  L  F  G  L  L  Y  L  R  N  Y  I  L  G  T  H  G  K  P  A  G  K  R  A  K  G  K  A
E
```